

Overseas



**SALISBURY COLLEGE OF
ADVANCED EDUCATION**
Salisbury East, South Australia 5109

VISITING LECTURERS IN EDUCATION

Applications are invited from persons with strong academic qualifications for the following temporary full-time positions as visiting lecturers within the Division of Education. The period for which the visiting lecturers will be employed is July-October, 1977, inclusive.

Position 1 (Educational Theory Department)

A lecturer with experience in one or more of the following subjects: History of Education, Philosophy of Education, Sociology of Education, Economics of Education and Educational Administration. The person appointed would have a lecture/tutorial commitment of approximately 12 hours per week and responsibility for a subject within the course structure. Applicants should note that several of the subjects have a necessarily Australian background.

Position 2 (Applied Psychology Department)

A lecturer with experience and authority in Developmental Psychology to take approximately 12-14 hours of lectures and tutorials each week. Applicants should give details of teaching experience at primary, secondary and tertiary levels.

Position 3 (Teaching Studies Department)

Either: (a) A lecturer in Educational Technology. The Educational Technology Centre at Salisbury C.A.E. provides a compulsory basic course in Educational Technology for all first-year teacher education students; optional courses in Educational Technology Theory and Production at third-year level; and a one-year Graduate Diploma programme at fourth-year level, which aims to prepare Media Specialists for schools. These courses emphasise the integration of learning theory and practice with the design, production and evaluation of instructional materials. The Educational Technology Centre also provides an audiovisual service programme for all College Departments.

The successful applicant will be expected to make contributions to the teaching and service programmes of the Centre.

Or: (b) A lecturer to take approximately 12-14 hours of lectures and tutorials in the introductory General Methods course, which is taken by all first-year primary and secondary teacher education students at the College. Teaching experience at either primary or secondary level is essential.

Or: (c) A lecturer who could contribute in terms of both content and presentation to the following: (i) a course in Educational Technology for all first-year teacher education students; (ii) a course in Educational Technology Theory and Production at third-year level; and (iii) a one-year Graduate Diploma programme at fourth-year level, which aims to prepare Media Specialists for schools. These courses emphasise the integration of learning theory and practice with the design, production and evaluation of instructional materials. The Educational Technology Centre also provides an audiovisual service programme for all College Departments.

The successful applicant will be expected to make contributions to the teaching and service programmes of the Centre.

Applications should be addressed to—

Mr. H. E. R. Townsend,
c/o National Westminster Bank,
Church Side Branch,
55 High Street,
Windsor, Berkshire, U.K.

To arrive not later than 30th November, 1976.

AUSTRALIA

ROYAL MELBOURNE INSTITUTE OF
TECHNOLOGY

PRINCIPAL LECTURER — DESIGN DEVELOPMENT

DEPARTMENT OF MECHANICAL
AND PRODUCTION ENGINEERING

Applications are invited from well qualified graduates with a B.Sc. or equivalent in Mechanical Engineering, to the Department of Engineering Design and Production. The position is a full-time, permanent appointment and to foster and develop design within the context of a total technology involvement. The successful applicant will be expected to combine academic teaching of a high standard with personal qualities of enthusiasm and capacity to work effectively with staff across subject and discipline boundaries.

The position offers considerable scope for the development of undergraduate and graduate level activities of an interdisciplinary nature. Applicants should have extensive and varied industrial experience and preferably have experience of teaching at degree level. Possession of postgraduate qualifications would be an advantage.

SALARY: \$A21,406 per annum.

REF: 114/28/AS. CLOSING DATE: 29/11/76

Prospective applicants for this position should obtain a Schedule of Duties from the Personnel Branch, R.M.I.T., Box 2478V, G.P.O., Melbourne, Australia.

LINCOLN INSTITUTE

A College of Advanced Education in the Health Sciences

Lincoln Institute is seeking new academic staff for 1977 to participate in its expanding teaching programmes. The Institute is situated in Melbourne and currently offers diploma or degree courses in Occupational Therapy, Physiotherapy, Speech Pathology, Medical Record Administration, Orthotics, and Prosthetics and Orthotics. The School of Chiropractic will take its first students in 1978.

School of Chiropractic

HEAD OF SCHOOL

Applications are invited for the post of Head of School, the appointment to be made at either Lecturer or Senior Lecturer level. Applicants should have appropriate professional qualifications and teaching experience. The Head of School is expected to commence at the Institute by mid-1977 to plan for the School's first student intake in February 1978. Applicants when the position was first advertised in 1975 should comply.

School of Communication Disorders

TWO POSITIONS IN CLINICAL EDUCATION

The appointees will be required to assist with clinical education in the School and in the Speech and Hearing Clinic at the Institute. Salary will be within the Lecturer range.

TWO HALF-TIME TUTOR/CLINICIANS

The appointees will be required to conduct tutorials in speech and language pathology and to assist in the Speech and Hearing Clinic at the Institute. Opportunity exists for appointment in conjunction with full-time postgraduate studies. Salary will be within the Tutor/Senior Tutor ranges.

ONE FULL-TIME TUTOR/CLINICIAN

The appointee will be required to conduct tutorials in speech and language pathology and to assist in the Speech and Hearing Clinic at the Institute. Salary will be within the Tutor/Senior Tutor ranges.

School of Physiotherapy

SENIOR LECTURERS

(3 Positions)

Qualifications: Applicants must have a basic physiotherapy qualification and wide postgraduate experience and qualifications.

Position 1: To co-ordinate the third-year programme and take responsibility for the co-ordination and presentation of the Physiotherapy III curriculum and programme, including the organisation of clinical education for third year.

Position 2: To co-ordinate the fourth-year programme and take responsibility for the co-ordination and presentation of the Physiotherapy IV curriculum and programme, including the organisation of clinical education for fourth year.

Position 3: To co-ordinate all postgraduate, inter-service, and continuing education in the School of Physiotherapy and take responsibility for the organisation of individual courses, academic and clinical.

LECTURERS

(3 Positions)

Qualifications: Applicants must have a basic physiotherapy qualification and considerable experience in the field concerned.

Position 1: To take responsibility for the preparation, presentation and evaluation of the curriculum in Orthopaedic Physiotherapy in the third and fourth years of the programme and for the organisation and supervision of clinical education in this area of physiotherapy.

Position 2: To take responsibility for the preparation, presentation and evaluation of the curriculum in Neurological Physiotherapy in the third and fourth years of the programme and for the organisation and supervision of clinical education in this area of physiotherapy.

Position 3: To take responsibility for the preparation, presentation and evaluation of the curriculum in Kinesiology and Applied Anatomy in the first year of the programme.

School of Prosthetics and Orthotics

SENIOR TUTOR/LECTURER

(2 Positions)

The School requires two Prosthetists and/or Orthotists for its teaching and clinical programmes. Responsibilities include teaching and instructing students in Prosthetics and/or Orthotics, including the technical application of materials, use of tools and equipment, fitting, fabrication and alignment of appliances.

School of Occupational Therapy

SENIOR LECTURERS/LECTURERS

(2 Positions)

Position 1: A position exists for an experienced occupational therapist within the area of occupational therapy applied to physical disability. The appointee will have appropriate qualifications and a background of relevant clinical skills and experience. Applicants should have demonstrated ability in teaching and course implementation within an educational programme and will be expected to contribute to the overall development of the School.

Position 2: A position exists for an experienced occupational therapist to assume a senior role within the School. Applicants should have appropriate qualifications and a background of organisational skills within a clinical or administrative setting, and have demonstrated leadership and effective interpersonal relationships. The appointee will have responsibilities within the areas of new course development and continuing education and be required to contribute to the overall development of the School.

OCCUPATIONAL THERAPISTS

(Several Positions)

Applications are invited from qualified occupational therapists interested in positions within the following applied occupational therapy programmes: (a) Physiotherapy, (b) Occupational Therapy, (c) Prosthetics and Orthotics, (d) Occupational Therapy, (e) Occupational Therapy, (f) Occupational Therapy, (g) Occupational Therapy, (h) Occupational Therapy, (i) Occupational Therapy, (j) Occupational Therapy, (k) Occupational Therapy, (l) Occupational Therapy, (m) Occupational Therapy, (n) Occupational Therapy, (o) Occupational Therapy, (p) Occupational Therapy, (q) Occupational Therapy, (r) Occupational Therapy, (s) Occupational Therapy, (t) Occupational Therapy, (u) Occupational Therapy, (v) Occupational Therapy, (w) Occupational Therapy, (x) Occupational Therapy, (y) Occupational Therapy, (z) Occupational Therapy.

Applicants should have a recognized diploma or degree in occupational therapy. Appointments will be made within the Tutor/Senior Tutor/Lecturer ranges.

Salaries: Lecturer A\$13,228 — A\$17,888. Senior Lecturer A\$18,034 — A\$20,928.

Terms and Conditions: Terms of employment are similar to those prevailing in Australian colleges of advanced education and universities. Assistance will be given towards fares and removal expenses for overseas or interstate appointments.

Inquiries: Direct inquiries to the respective Heads of Schools, at the address below, for positions in Communication Disorders, Occupational Therapy and Physiotherapy; and to the Director for Head of the School of Chiropractic.

Applications: Send applications, c.v. and the names of three professional referees to the Staffing Officer, Lincoln Institute, 528 Swinerton Street, Carlton, Victoria, 3063, Australia. Telephone 347-7544. Applications close 10 December 1976.

General Vacancies continued

NORTH WALES

FIELD STUDIES UNIT
FISH THE BARN

WATERLOO UNIVERSITY
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THE TIMES

Higher Education

November 19, 1976. No. 265

SUPPLEMENT

Price 18p

Teaching companies given £413,000 boost

by David Walker

Two new "teaching company" schemes were started this week in Birmingham and Salford to try to bring students and private industry engineers into fruitful contact. They are being financed by £300,000 from public funds.

A grant of £113,000 has been awarded to Loughborough University to set up a company with Herbert Morris, the crane manufacturer.

Postgraduate engineers from Salford University are to work for the General Electric Company while continuing to attend courses at the university and at the University of Manchester Institute of Science and Technology.

In Birmingham a collaborative

programme has been arranged between the university's department of engineering, production and design and the Science Research Council and the Department of Industry. Birmingham's department of production has received £150,000 from the SRC.

The kernel of the schemes, as laid down by the working party, is the selection of well-managed and successful manufacturing firms to partner university and polytechnic engineering departments. The teaching companies should provide for manufacturing engineering the high quality environment for training and for improvements in professional practice that the teaching hospitals does for medicine.

In these companies, young engineers would receive training at post-

graduate level in the advancement of manufacturing engineering, and would help in the carrying through of advances in a real trading firm.

Each Salford trainee will carry out a project for GEC Switchgear Ltd which is part of the company's central development programme.

Birmingham University's four

graduates will be set specific tasks and given training, not only in engineering but also management. They will spend some time at the Lucas Institute for Engineering Production, a residential centre linked with the engineering production department.

Similar schemes are understood to be under consideration at Lancaster and Manchester Polytechnics.

Create science minister MPs urge

by David Dickson

A Minister of State should be appointed to take special responsibility for science and technology within the Department of Education and Science, according to an editorial in a parliamentary committee. Such a minister should be primarily responsible for scientific and technical education at all levels, and for the promotion of science in the public domain.

These are among proposals for wide-scale changes in scientific and technical higher education to bring it more in line with social and economic needs made by the House of Commons Select Committee on Science and Technology.

A report published yesterday, based on an 18-month inquiry by the committee's science subcommittee, suggests that a number of universities should be designated as Special Institutions for Science and Technology Education and Research (SISTERS). They should introduce new degree qualifications in applied science and engineering subjects.

The committee also suggests that the University Grants Committee be instructed by the Secretary of State for Education and Science to regard engineering and applied science training as a privileged area in which, in particular, the normal staff: student ratios should not be expected to apply.

Additional earmarked funds should be supplied to the UGC for the support of technological education, and in particular for the development of facilities in the special institutions.

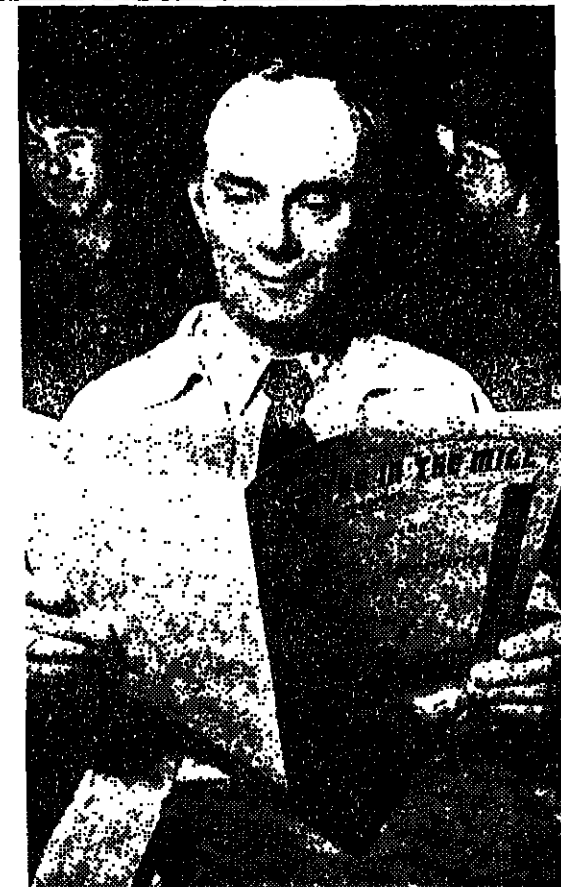
Among its main conclusions are: "The training of engineers and applied scientists suitable for employment in productive industry should be given much higher priority."

"Universities and engineering institutions should combine methods of achieving greater collaboration in the control of standards and the content of degrees. Greater consideration should be given to the introduction of higher maintenance grants for undergraduate and postgraduate students in the applied sciences and engineering."

"The Government should attempt to transfer to universities research work of a more basic nature, not requiring major physical research facilities, wherever possible."

Consideration should be given to the transfer of a proportion of the funds of the Science Research Council to the Department of Industry.

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Alan Ayckbourn, the playwright, at the Theatre in the Mill, Bradford University's new theatre, which he opened last week. The opening coincided with the tenth anniversary of the granting of the university's charter and a revue, "Ten Years On", was written for the occasion. The new theatre, which is in the round, cost £36,000.

NUS travel trouble

The troubled National Union of Students travel service has received a loan of around £350,000 from its Australian counterpart, the Australian Student Travel Service.

Without the loan the NUS company would be unlikely to survive the slack winter period, despite its recent decision to make 40 of its 210 staff redundant. The latest published accounts, in February, showed an accumulated deficit of over £250,000. Losses have now risen to more than £300,000.

Government's thorny fee rise choice

by Peter Scott

The Government will have to decide in the next two weeks how much students will be charged for tuition fees. Because these fees are paid by local education authorities, they form an important element in the rate support grant which is now being negotiated.

In the summer Mr. Mulley, when he was still Secretary of State for Education and Science, announced that the Government intended to charge universities and colleges to educate undergraduates £650 and postgraduates £750 a year for

This was in line with an earlier recommendation from a joint vice-chancellors and University Grants Committee working party that the existing differential between fees for home and for overseas students should be abolished, although the figures were considerably greater than the £250 common fee recommended by the working party.

Some vice-chancellors are now afraid that their earlier insistence on abolishing the differential has inadvertently encouraged the Government to charge all students high tuition fees. To that extent the commitment to the abolition of the

discrimination against overseas students has been weakened.

The Government, too, is having second thoughts. They fear that the new higher fees may discourage industry from sponsoring students and generally act as a disincentive to the creation of closer links between higher education and industry.

However, the Government remains committed to making savings in the order of £100m in the higher education budget. So it is unlikely to be kept low. It can only be at the expense of overseas and postgraduate students.

Tory students shake leftists' hold

by Peter Wilby

A Tory wind of change appears to be sweeping dramatically through universities and polytechnics. Mr. Mike Forsyth, chairman of the Federation of Conservative Students, claimed this week that local associations were reporting average membership increases of 60 per cent since September. Over the same period, the number of Conservative associations in higher education had increased from 160 to 170, he said.

Last summer, the federation claimed around 10,000 members. At the current rate of progress, it expects to double that by the end of the academic year.

The Tories' new strength will be reflected in their representation at the National Union of Students' conference in Blackpool next month where they will control the Birmingham, Hull, Nottingham, Edinburgh and Southampton university delegations. On the Bristol, Liverpool, Newcastle, Reading and University College London delegations, Conservatives will be the largest distinct political group and on the seven-strong delegations from Leicester University and Queen Mary College, London, they will have two places each. Most of the other delegates from those unions will be "moderates".

They will also have substantial representation on mixed delegations from Exeter and the University of Manchester Institute of Science and Technology. At Kent, a delegation including Maoists, Trotskyists and Liberals was elected, but a Conservative topped the poll.

The Tories have even made names among the polytechnic delegations where their representation was almost non-existent last year: they will control Leeds, have three out of eight places on the Leicester delegation, and one place on a moderate delegation from Huddersfield Polytechnic. At Kingston, a Conservative topped the poll though all the other successful candidates were left-wingers.

It seems that the ruling Broad Left group in the NUS, an alliance of Communists, Labour Party and non-aligned socialists, now has fewer committed votes in the universities.

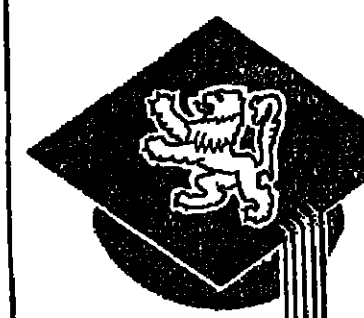
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On the other hand

A new fortnightly diary "On the other hand" appears in THE TIMES for the first time on page 5. It will alternate with "Don't Diary". Also appearing for the first time in this week's issue, on page 4, is "Research", a page of news about the latest research. It will appear monthly and alternate with "Academic Developments" which covers new developments in the curriculum.

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Fowler criticizes plan to drop adult council

Sue Reid

Government plans to abandon the long-awarded national advisory council for adult and continuing education were strongly criticized this week by Mr. Gerald Fowler, former minister of state overseeing higher education.

Speaking at Sheffield City Polytechnic he called on Mrs. Williams, the Secretary of State for Education, to underline her belief in open government in education by setting up an advisory council and involving the providers and consumers of continuing education in its future planning.

He added: "There are now often repeated rumours that the Department of Education and Science, or the secretary of state, has gone cold on the proposal to create, under the auspices of the National Institute for Adult Education, a new council to consider the future development of adult and continuing education."

It would, said Mr. Fowler, be "strangled at birth". Morale in adult education was a very low ebb and because of lack of money, rather than of will, the Government had only been able to implement a few of the recommendations outlined in the 1973 Russell report.

The adult literacy programme, continued support for the Open University, support for trade union

studies, mandatory grants for mature degree students irrespective of initial educational qualification, a new system of grants for students at the long-term adult residential colleges and discussions with the Workers' Educational Association about the Russell priority areas had all been indications of the Government's good intentions.

But these initiatives would be given coherence only by the creation of the proposed council. That alone would demonstrate that the Government was committed in the long term to the development of educational opportunities for adults.

It was reasonable to believe that investment in continuing education might in the future show a higher return than could ever be derived from a constant increase in the investment in child education, added Mr. Fowler. The adult learner was highly motivated and he built his formal education upon the solid foundation of practical experience.

It was, he said, essential that a coherent and continuing development plan was evolved in which all the relevant educational and training interests, not simply the DES and Manpower Services Commission, were involved. The principal task of the proposed national advisory council was to bring together the many interests and to plan for the long term.

Make education savings among over 16s, Dr Boyson says

Most savings in public spending could be made in further and higher education, Dr Rhodes Boyson, MP for Brent North, told the Cheshire Young Teachers Conference at Buxton.

Many classes in colleges of further education were very small and should be shut down. There was also evidence from the very high O and A-level failure rate in such subjects that unsatisfactory students were recruited simply to keep up the numbers.

The pupil/teacher ratio in polytechnics of 6.9:1 was far too low—lower than 8:1 in universities. It was also doubtful whether their arts and social science courses fulfilled any genuine purpose.

"In the light of Mr. Callaghan's call for a switch to engineering and science, the arts and social science courses could be shut down."

Foreign students should be charged full economic fees. There was no justification for 16-plus leavers having to cover the fees of rich foreign students. Students from poor countries should be

helped by the overseas aid budget. The Labour Party would have to make education cuts and teachers should make their own list of priorities. Teacher-training should be much more school-based and the recruitment of thousands of teacher trainees who local authorities would not be able to employ should end.

Earlier he said that education in 1985 took 1.7 per cent of the gross national product. It now took 7 per cent.

"It would need the most peevish bystander to believe that we had really got value for money from the fourfold increase. The £6,000m yearly education budget must be cut back by at least £1,000m."

Dr Boyson said recruitment to teacher training colleges must be on higher standards. English and mathematics, a science and a foreign language should be compulsory passes at O level for all recruits.

In nursery education we could not afford any expansion and fees, graded on a means test, should be introduced in all existing nursery schools.

Five principals defend their colleges against belittlers

Five principals of colleges of higher education in the north-west this week attacked efforts to belittle their institutions.

In a statement they said that teacher training was the traditional route of many students with working-class backgrounds to higher education. The same was true of women.

"We are convinced that efforts to belittle the colleges of higher education will do disservice to the country and to higher education as a whole by discouraging these two groups from raising their expectations to undertake degree studies in the institutions to which they have looked extensively in the past."

The statement was signed by Mr. John Williams, principal of Padgate College of Higher Education, Warrington, Mr. Malcolm Seabourne, principal of Chester College of Higher Education, Brother Augustus, principal of De La Salle College of Education, Manchester, Mr. Ken Millins, director, Edge Hill College of Higher Education, Ormskirk, and Mr. Arthur Johnston, principal of the City of Manchester College of Higher Education.

It was issued after a meeting at Padgate on "the common problems

affecting the colleges in the rapidly changing situation". Twenty people from colleges of education and higher education in the north-west and from the universities of Manchester, Lancaster and Liverpool were at the meeting.

"The statement opposed the attempts to restrict college activities to courses lower than degree level and to confine colleges to serving the local community. 'We wish to assert that we remain national institutions which have for a decade taught for degrees. We offer a genuine alternative within higher education for those who are qualified to embark on degree studies.'"

Colleges of higher education had several advantages. These included degree courses in both traditional and non-traditional subjects and a wide range of programmes of study such as liberal studies in arts, science and social studies.

Other advantages were the medium size and cohesive nature of colleges, often with a high proportion of students in residence. They were also the cheapest sector of higher education and had links with the local community as well as being national institutions.

London agrees on Bill draft

London University has agreed the final draft of the private Bill to increase its statute-making powers which is to go before Parliament at the end of the month.

The draft, reached after two rounds of consultations with the schools, makes clear that the senate should not in any way be able to reduce the schools' freedom which they have under the present statutes. This had been a point of contention with the Association of University Teachers, which represents 6,000 lecturers at the university.

But Mr. John Akker, deputy general secretary of the AUT, warned this week that the Bill could still "run into trouble" with the unions. The AUT was still dissatisfied with the degree of teacher representation on the university senate outlined in the Bill, which, he said, was less than its present level.

The AUT would be considering whether to put forward an amendment to the Bill through sympathetic MPs, he said. Other unions were considering similar action.

Even if the Bill has an easy passage, it will not become law before next Easter. It will release the university from one "strait-jacket" section of the University of London Act 1926, which strictly limits its statute-making powers.

The draft of the new statutes is now being circulated among teachers, schools and institutes and final comments are expected by next April.

Students write prospectus for 'low demand' Keele

An alternative prospectus produced by students at Keele University advises sixth-formers on housing, examinations, social life and courses at the university.

It tells would-be students that they have a good chance of a place at Keele which has declined in popularity recently, possibly because of its four-year degree courses which are less attractive since the decline in value of the student grant.

"The low number of applicants in recent years has also meant that several of the courses, particularly the four-year science ones, have had to fill up their quota through clearing."

The prospectus claims that because many Keele students come "simply because they could not get in anywhere else" a higher than average number of students leave before the end of their courses.

But it points out that the system of taking a foundation year then a three-year course allows people to switch subjects fairly easily and also provides opportunities for broadening one's interests.

Despite the original ideal of a people's university for the Potteries, the prospectus says the university is "still as isolated from the outside world as it was 20 years ago". With

the greater involvement of local politics this may be changing, it adds.

Keele is said to be a traditional method of assessment, with most other universities in the country having about 25 exams during his or her time there.

There is also criticism of the unique foundation year which is accused of "a narrow approach". Several students and academics are said to be "in favour of" major changes which would be implemented in 1977/78.

On housing the prospectus says there is no accommodation charge. On the contrary the way they found it difficult to find a room on campus, with many students wanting to live in the city.

On the question of social life, it says: "There can be no doubt that Keele is much more demanding socially and emotionally than academically." The main point is said to be claustrophobia.

The prospectus concludes: "We are a fairly broad university that is not really geared to specialise in any one profession, or perhaps the ideal place to be

Too much diversity means 'Cinderella status'

Adult education's dearth of research may have hindered its standing in the educational community, Mrs. Jane Purvis, of Portsmouth Polytechnic's department of social studies, has claimed.

Writing in the latest edition of *Research*, she maintains that the Cinderella status of adult education has been perpetuated by its diversity of provision and the difficulty of deciding which activities came within its boundaries and which could genuinely be called "educational".

Although adult education had gained in strength through embracing such a wide range of courses in the twentieth century its "whimsy" provision had undoubtedly hindered the improvements of its prestige within the wider educational community.

Another factor aiding the low prestige had been adult education's ambiguity in terms of structural location within the Department of Education and Science. The 1973 Russell report had not placed it in the general uncertainty about the priority accorded to adult education by the central government derived from the fact that it had no obvious place in the administrative structure of the department.

Since the 1944 Education Act, adult education had been included in the further education division and until 1968 the DES used the term "further education" to refer to "non-vocational, non-technical adult education. Now a new branch—higher and further education—had been created and adult education sat in this division along with youth and technical education.

University lecturers get rise

University teachers will receive a 5 per cent pay increase, subject to a maximum of £4 a week, from October 1, the Department of Education and Science announced.

The rise, which is within current pay limits, affects about 25,000 and represents an increase in pay bill of roughly 3.5 per cent, bringing the total to £23m.

The anomalies incurred due to last year's salary negotiations are to be reviewed as soon as a policy permits, the DES said.

The salary scales from 1976 to 1979 are as follows:

Lecturer	3330
Senior Lecturer/Reader	3975
Professor minimum	4500
average	5200
	5800
	6400
	7000
	7600
	8200
	8800
	9400
	10000

Poly faces series of strikes over replacement policy

Administrative staff at Middlesex Polytechnic went on strike on Wednesday, the first of a series of one-day stoppages to protest against the college's plans to fill fewer than 50 per cent of the non-teaching posts that fall vacant.

The 500 staff, members of the National Association of Local Government Officers, were joined by polytechnic students who were also protesting over the national cuts in education spending and the redeployment of a NALGO member within the college.

The series of strikes will be staged in rotation by NALGO members at each of the polytechnic's five main sites. A spokesman for the union said: "The college's staffing commitment decided last month to fill only three of every seven non-teaching posts that become vacant."

"The decision will have a serious impact on staff morale and increase the workload of individuals. We will continue the strikes as long as necessary."

He said the union was also disputing a decision to redeploy an assistant communications officer as an assistant staff development adviser. "We are not in favour of some people getting preferential treatment while others suffer. It has become more and more difficult for

people to move posts within the polytechnic and promotion prospects are obviously affected."

Minister's remark confirms rate support grant fear

A remark by Mrs. Williams, the Secretary for Education, has confirmed fears in local government circles that this year's Rate Support Grant might be the last of its kind.

It is feared that the education budget will in future be earmarked for specific use by local authorities instead of the support grant which has been a global sum which the local authorities have freedom to spend.

Mrs. Williams said on Monday: "I would very much like to see us getting a specific grant and that would require a change in legislation. There was no guarantee at present that if the government provided the money for in-service training in the RSG the 'bird-meat' authorities would use the money in that way, she said.

Source within the Department of Education confirm it "would be like" to pin down the money provided in RSG. However, to go ahead would require legislation likely to be controversial.

Last week officials of the Association of Metropolitan Authorities revealed that there had been strong negotiations on support grant to encourage the use of money, in-service training is a prime candidate for earmarking.

Williams and Mr. Oakes, the Minister of State overseeing higher education, have made firm commitments to expand it and the programme is highly valued by the teachers' unions.

However, it seems likely that this year's support grant will be an announced very soon—will be in the traditional form.

Teachers blamed for industry's lack of talent

Productive industry has been starved too long of the best talent and the fault lies mainly with a generation of teachers, a leading industrialist has claimed.

Speaking at a conference on Post School Education organized by the Society for Education, Mr. Gordon, director of Robert Gordon's Institute of Technology, Aberdeen, said: "The education system has produced a generation of people who are not prepared to enter industry."

Principals and staffs in higher and further education should be more outspoken on these matters. Educationists should be thinking about measures for either radically and permanently improving the nation's financial situation or changing society so that people could live happily on less, a return to a peasant-based society.

Dr. Clarke suggested a programme as a basis for discussion on what should happen in the non-university sector of post-school education. He said that the number of graduates was falling and the number of people entering the workforce was rising.

"Comprehensive manpower planning and course provision should be based on consultation with education, industry, commerce, the professions and central and local government."

The extraordinary imbalance between jobs and outputs of graduates from non-vocational courses was a pressing problem. At least one-third of the 400,000 students in higher education were on such courses.



Queen Elizabeth, the Queen Mother, attended a reception at Senate House, London University, last week to celebrate 100 years of adult education at the university. She is pictured above with, from left, Professor J. M. Wise, chairman of the Council for Extra-Mural Studies and Dr. Frank Hartley, vice-chancellor of London University.

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Cash crisis threatens studentship numbers

by Frances Gibb

Postgraduate studentships may be severely cut back in 1977-78 because of financial difficulties in some research councils. At the same time, demand from students is expected to increase.

Although the research councils have not yet been told their grants for 1977-78, the chairman of the Science Research Council has estimated in a confidential document that the council's budget will be reduced by 3 per cent to £112.5m.

This would mean a reduction in the number of new studentships from 3,380 to 3,200, giving a saving of £200,000.

Such a reduction would be a direct contradiction of the council's policy statement in 1975-76, the annual report, which said that the number of new postgraduate studentships would be maintained at about 3,400, although even this is 15 per cent less than in 1975.

The Medical Research Council has announced that studentships in 1977-78 are likely to be reduced, although by how much is not yet known. The number it has offered has declined steadily in the past two years. In 1975-76 the total was 294 and in 1976-77 it was 287.

It has also been decided to suspend the replacement awards in order to minimize the cut in research studentships. These are made to departments when a student on an award decides after one year not to continue his course. Last year 12 replacement awards were made.

The council said it very much regretted the need for this measure. A spokesman from the Social Science Research Council said the council's policy was to maintain the level of studentships and a reduction was not being planned at present. It, however, cut of 10 per cent was made in the SSR's budget for 1977-78, the number of studentships would be reduced.

The signs were that competition

was getting tougher, he said. This summer there had been 1,171 applications for 138 pool awards (those remaining after allocations have been made to departments) and the year before 967 applications for 118 awards. Applications in 1974 were under 800.

The proportion of students taking up their awards had also gone up by 4 per cent between 1975/76 and 1976/77.

The research councils do not expect the proposed increases in tuition fees to cause a further reduction in the number of studentships offered. They expect to be reimbursed by the Treasury for the extra money needed.

But Mr. Philip Williams, an administrative officer from the university support division of the National Environmental Research Council, said if the money was not reimbursed, the council would find itself supporting some 40 per cent fewer students in 1977/78. This would mean offering 250 to 300 studentships instead of 480 to 500.

As it was, the council was planning only on a 1 per cent growth rate this year instead of the 2 per cent the year before. The number of awards planned for 1977/78 would therefore be about 493 instead of 498.

Applications were up and would probably be even higher next year, he said. In 1975 there had been 254 applications for 80 pool awards and in 1976, 281 applications for 50 pool awards.

The take-up rate was also increasing, with 82 per cent of awards allocated to departments taken up in 1975, and 92 per cent in 1976. The number of graduates failing to obtain awards had therefore increased. This last summer, for example, there had been 15 candidates with first class degrees failing to gain awards, he said.

The Agricultural Research Council reported a substantial increase in awards offered between 1975 and 1976: from 21 to 31.

'Dramatic' economies needed

Keele University will have to make dramatic economies for the next two years, Professor Campbell Stewart, the vice-chancellor, warned last week.

Writing in the university newsletter, he predicted that savings would need to total £300,000 in 1977-78 in order to balance the books. The plight of Keele and the other universities was no fault of their financial management, he added.

Professor Stewart calculated that the University Grants Committee's warning of a 4 per cent drop next year from present grant levels

would mean spending £200,000 less with additional costs of £100,000 likely to arise from inflation.

"The whole exercise is devised to reduce expenditure on university education by a dramatic amount and while we, like others, will strive to improve matters as soon as we can, the blizzard is now coming down on us and we have got to find the means to economize and ride it out," Professor Stewart said.

An expenditure review committee had been reconstituted to examine every possible saving but the vice-chancellor warned that all the savings made so far did not compare with the severity of what lay ahead.

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Fifteen join vocational scheme

At least 15 further education colleges in England, Scotland and Wales will be involved in the first phase of the Government's pilot schemes for the vocational preparation of 16 to 19-year-olds.

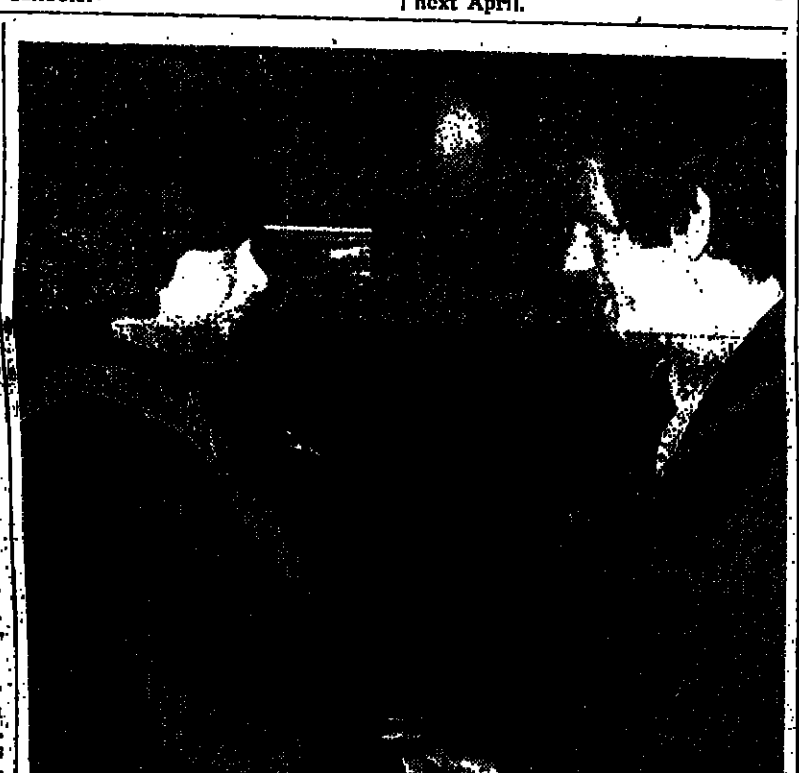
The 24 schemes will also be based on employers' premises and Government difficulties. The majority will be launched in 1977 but some will start in 1978.

Some universities will also be able to take part and they will be eligible for training allowances.

The "industrial" training boards covering rubber and plastics, clothing, the food, drink and tobacco industries, the distributive trades and chemicals and allied products will be responsible for a number of schemes within the programme.

James Leicester dies

Dr James Leicester, deputy director of the Polytechnic of North London, since its creation in 1974, has died. He was aged 60. Dr Leicester was principal of the Northern Polytechnic until five years ago when the college merged with the North Western Polytechnic to form FNW. Previously he was head of the department of applied chemistry at the Northampton College of Advanced Technology.



Linda Simpson was one of seven "allot" students to graduate this month from a course at Milton Keynes College of Further Education, leading to an Open University degree and a Certificate of Education. She received her award from Mr. Gerald Fowler, Minister of State for Education, at the first degree ceremony to be held at the OU headquarters.

RESEARCH

Cambridge project finds mathematical weak spots

by Judith Judd

Research to discover the areas in school leavers' mathematics which need remedial work is under way at the Medical Research Council's Applied Psychology Research Unit at Cambridge University.

Mr Graham Hitch, an experimental psychologist, has studied a sample of 95 industrial trainees, aged between 17 and 18, at colleges of further education.

He gave them tests of elementary arithmetic with integers and tables, simple arithmetic with fractions, decimals and conversions, and on the manipulation of arithmetic expressions such as the appreciation of the magnitude of numbers.

His work is not yet complete but he has found, for instance, that people who have difficulty with one type of calculation do not necessarily have difficulty with another.

He found that though few of his sample had problems with adding decimals, more than 70 per cent could not divide them.

He says: "It looks as though it may not be enough to say that someone has difficulty with the decimal point. The area may have to be broken down further if people are to be helped."

He describes the general standard among his sample, which he admits is a small one, as very low indeed. There are considerable variations between different types of arithmetic.

The errors in the simple integer arithmetic were very few indeed. The hardest area of all was fraction arithmetic with more than 70 per

cent of the sample having difficulty with most of the test questions.

When he came to look at the type of error being made he found that in an appreciable number of cases, though not all, a pattern emerged.

He says: "In some cases when they do not know the right rule, instead of behaving at random they use another rule, perhaps a rule they are borrowing from integer arithmetic."

"It may be their performance could be improved by putting particular emphasis on discrimination between different skills."

The research also sheds light on the Certificate of Secondary Education mathematics examination. Of the 18 of the sample there were no data on examination passes. Of the remaining 77, 57 had CSE mathematics with an average grade of three and six had O-level mathematics.

Mr Hitch says: "A CSE grade in mathematics does seem to be correlated with most of the elementary skills except the speed of adding and subtracting integer numbers."

The next stage in the work will be to look at a group of housewives who left school at 16 with no formal qualification in mathematics and compare them with the results from the industrial trainees.

If the housewives prove different then it will be possible to start talking about differences in education syllabuses. If not, says Mr Hitch, the debate about the relative merits of the old mathematics and the new can be thrown out for good.

Amateur Society leads theatre study

by Frances Gibb

Theatre research, both in Britain and abroad, owes much in origin to the work of a little-known amateur organisation called the Society for Theatre Research.

Founded in 1948, the society aims to be a "meeting point for all those—scholars, research workers, actors, producers and lovers of the theatre—who are interested in its history and technique."

Within the limits of its funds, which depend almost entirely on subscriptions from its 800 members, it promotes research in theatre by publishing original work, producing a journal and holding lectures.

The society was founded originally by and for amateurs. Now it has expanded and one third of its membership are academics and students, but it is still run entirely by amateurs in their own time.

Publications are the society's main work. The journal, *Theatre Notebook*, appears three times a year, with the help of a small grant from the Arts Council. The esoteric articles (contributed by members) which include titles such as "An early 18th century cast list for Shakespeare's *Julius Caesar*" or "An annotated census of Thomas Betterton's roles 1659-1710" would not easily find an outlet in other academic journals.

The editorial board is a mixture of laymen and academics whose most recent addition was Professor Michael Booth, recently appointed to the new chair of drama at Warwick University.

The society also aims to publish each year at least one book of research. Again, the cost is normally met from society funds, though occasionally it has found a firm of publishers willing to share costs if the work is likely to be fairly widely bought.

Works are not usually commissioned; they are chosen from those sent in by members. Miss Kathleen Barker, one of the honorary secretaries, during the February 1974 election and has recorded programmes during the election in October and the Common Market referendum in 1975. It is housed in the audio-visual section of the university library.

Leeds historians have made something of a speciality of the use of mass media in their teaching and Professor D. N. Bilby, chairman of the school of history, will run the election project with Dr Blumler.



A young Marlon Brando as Mark Antony in Julius Caesar

ties, and the schools relations officer at the London University Institute of Education, explained: "We try to keep a balance between the centuries and between the themes. We also always have in mind whether the book is likely to find a commercial publisher, and if this is the case, we would not select it. We go for the scholarly but uncommercial contribution."

If there were no shortage of funds, the society could easily select three books a year. Past titles have included *The Benefit System in the British Theatre* by S. Vincent Troubridge, and *The London Theatre 1811-1866: selections from the diary of Henry Crabb Robinson*.

Perhaps its major contribution was a commissioned work: *A Bibliography of English Theatrical Literature 1559-1900* by J. P. Armit and J. P. Robinson, a listing of over 5,000 titles and editions extending the original work of Robert W. Lowe, which has become a standard reference book. Some money for this, which cost £8,000, came from the British Academy, the Carnegie Trust for Scotland and other learned societies.

The society's activities have had various spin-offs. Mr Barker, the other honorary secretary, said: "All the university departments (there are now 15) in this country have been aware of the society, so in a way, by generating a social atmosphere, it has helped to create an academic discipline of theatre history."

It has also spread research abroad. At a conference held in 1955, by 28 countries, an International Federation for Theatre Research was set up, which brings up similar organizations from all countries.

The federation publishes the journal *Theatre Research Journal*, edited by Professor I. Armit, head of the drama department at Glasgow University, and Mr K. R. Richards, reader in drama at Manchester University.

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Women under stethoscope

General practitioners are disheartened to complain of the report, made on their time by much-asked women with rather negative symptoms, unspecified complaints often seemingly more in need of the "therapy of consultation" than medication. Two sociologists recently started a project to examine the regions, on the assumption that it is not just a matter of individual problems, and personal inadequacy.

Dr Helen Roberts, a research fellow at Sussex University, and Michele Barrett of the University of Hull, with the support of a Social Science Research Council grant, are attempting to explain high consulting rates among aged women.

It is commonly said "women have a psychosomatic" problem but the sociologists suggest the problem can most profitably be examined in terms of a social role of women of a certain age.

Dr Roberts, who has been encouraged by society and by her colleagues to see the role of women and mother. When children leave home women are vulnerable to feelings of social usefulness and frustration.

The group hopes to reach some general conclusions about the efficiency of higher education and the extent to which it gives value for money.

Professor Becker said: "Once completed, it should be a useful book. It should be the British system. People do ask: 'Is it worth it?' nobody has yet gone through the slog of getting all the information together."

As well as the separate national studies (which are to be completed next autumn) the International project also involves a number of "cross-national" studies of such topics as access to higher education and academic freedom.

On the other hand

The real Mackay

Scotland should set up a university or further education centre to help taxmen write beautiful letters to the public. Delegates at Glasgow University's one-day conference on "Scottish languages: the contemporary situation" heard Derrick Thomson, the university's professor of Celtic, say that they "could become the first nation to get tax demands in felicitous phrases."

He added that one college of further education was enthusiastically about the idea that it had already offered its premises for a centre at which to devise melodious Gaelic expressions for the inland revenue and others.

Professor Thomson's concern for fiscal aesthetics was part of a wider interest in lowland Scottish Gaelic, a language which has a vocabulary which can deal with modern needs.

His specific interest is Gaelic, which is related to Welsh and Irish languages, claims 12,000 speakers in Glasgow and is most common in the Highlands. "The language is in a state of flux and we now have the chance to affect its direction," he said.

"We must experiment with new words to make possible Gaelic council minutes, law reviews, literary criticism and so on. It is a unique chance to home down the language of local government into something clear, accessible and with literary merit."

He treated the large audience of academics and general enthusiasts to a selection of Gaelic scientific and literary texts, including a biology textbook, all of which defy a shorthand note.

The second minority language is Scots and the main problem here, according to a dithering Derrick Thomson, who lectures in English at Aberdeen University, is knowing whether you are actually speaking it or not.

While, for instance, Alexander Scott's line "A sair sramash—a hairs wee quible quavers", and so on, is undeniably Scots in both vocabulary and intonation, the doubt arises in speech which is more English delivered with a Scottish accent, as in "shut the windoe please".

Such corruption, he said, combined with wide regional variations means that every author writing in the Scots language must create his own literary tradition anew. But then to those who say they are proud of English because it is the language of Shakespeare I can only say that this is fine so long as you use it as well as Shakespeare did."

A more conventional ambition was that of A. J. Aiken, a reader in English at Edinburgh, who wanted to see "the Scots language taught in universities and schools. The subject is becoming big enough and we are producing enough good graduates to teach these courses if they existed", he said.

Also at the conference was David Morrison, whose "heroic scholarship", we were told, "has just triumphed in the completion of the 10-volume Scottish National Dictionary". "The Scots word game was mentioned. The Scots have danger of becoming a cult figure."

Meanwhile, back at Leeds University, where the students really should be given an antibiotics allowance in their grant, there is a high incidence of cardiac murmurs in healthy young females "or what passes for healthy. Out of 509 girls tested it is no surprise to learn that 265 were found suspect."

In the face of such atrocious statistics Sheffield University offered a paper on hernias which I decided not to read.

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In corpore sano?

The British Student Health Association has just published a collection of papers delivered at its last annual meeting which show just how dangerous studying can be.

One paper, "Accidents and Injuries reported at Leeds University 1964-1974" reveals that between January 3 and December 11, 1974, hardly anyone there remained upright. A laconic table of "accidents involving full of person" shows that a day rarely passed without someone announcing they had been "knocked over by a door" or "slipped off a stool whilst napping".

Disasters range from the dramatic "fell off stage" to the enigmatic "fell from ceiling void" to the perplexing "thrown by rubbish skip" to the desolate "fell down (tore trousers)".

If any student should actually make it into the lecture room then the chance of these on science courses collecting anything other than an aspirin seems remote.

One paper warns that "perhaps as many as 50 per cent of monkeys in Oxford have an antibody which does little harm to the monkey, but could do a lot of damage to the research worker who gets bitten".

It goes on to add that physiologists who use sheep occasionally catch of disease, which could help to explain the continuing swing to the arts.

Meanwhile Manchester University health service offers a paper on the heart rate of dental students at work. It finds that the pulse rate during a first filling rises from about 85.7 beats a minute to 111.2. One table plots the increase in an unusually nervous student when faced with a justifiably "distressed" patient. Patient enters (107), start high speed drill (102), patient restless and dizzy (104), patient faints (127), wash hands (105).

For arts students, who traditionally go for the more Henry Miller-inspired diseases, there is a paper on "Psycho-sexuality in adolescents" which shows that if Margaret Mead found no sexual problems in Samoa, the same cannot be said for Aston University. Its health service reports that women there are either put on pedestals or left on shelves, which does not help matters.

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Universities and the economy



Ralf Dahrendorf

It is difficult to quarrel with the view that the economic predicament around us demands a concerted effort by all, including universities and other institutions of higher learning. The Prime Minister is clearly not alone in demanding that universities make their contribution to overcoming the crisis. But what exactly is this contribution?

In trying to answer this question, people are strangely prone to produce answers of other misleading precision or astonishing fuzziness. Let me begin with the misleading precision. Twenty years ago, the Organization for Economic Cooperation and Development in Paris began to spread the myth that the correlation observed between economic growth and the proportion of each age group going on to tertiary education had some causal significance: the more university students there were, the faster the economy grew. In several countries, this was one of the motives behind the educational expansion of the 1960s, and when I first argued against the thesis (and for "education as a civil right") in 1964, it was clearly in a minority.

Today, few people would take such simple views. The relationship between educational expansion and economic growth is in fact much more tenuous. Once a country has reached and crossed the threshold of educational development—general literacy and numeracy perhaps, and something like 5 per cent of each age group in higher education—the immediate economic effect of educational development may well be negligible. I can see no case for the assumption that further expansion of tertiary education would have a significant impact on economic development in Britain today.

This is probably true in a more specific sense as well, that is, with respect to manpower planning. Some believe that it would be advantageous if universities trained engineers instead of scientists, and that in any case universities should gear up to national targets of manpower planning.

There are at least two arguments against such beliefs. One is that manpower planning is notoriously difficult. Indeed, arbitrary "best" many teachers, country needs, demands on deliberate decisions, how many accountants it needs depends on prevailing habits.

The other argument is equally important. Even apart from the fact that societies need unfettered critical minds as much as experts, it is simply not true that universities, or polytechnics for that matter, can impart the kind of expertise which matters in industry. Whatever the circumstances, university training will have to be supplemented "on the job", and since this is so, most people would agree that there is much to be said for a university training that is wide and general, one that opens the mind rather than closing it.

What, then, is the economic contribution which universities can make? On the positive side, one is tempted to begin with the most specific. When the Rector of the University of Mainz in Germany recently spoke about "universities as an economic factor", he found himself stuck with the secondary contribution of universities: 10,000 students in Mainz spend about £1.6m a month for private consumption plus another £0.6m on rents. A similar case can be, and has been made with respect to the economic contribution of overseas students in Britain.

Some may find this argument over-specific, although it is at least real. The same is true for another point. It looks as if the curse of the next decade is going to be not only the unemployment of the young, school-leavers, but university-leavers as well. Nobody has found a satisfactory answer to this worrying problem as yet, especially now that we know from American and German experience that economic expansion will not solve it quickly.

Under these circumstances, it would seem quite unreasonable to shorten the educational process, or indeed to reduce student numbers targets. True, graduates often find it as difficult as school-leavers to get an adequate job; and the fact that their expectations have been raised does not help. But is it not better to have versatile people, and people who know what to do with their time if they can live with a certain level of unemployment?

I wonder whether those who are considering cuts in educational expenditure should not make a careful comparison of the marginal (and the social) cost of the next 100,000 unemployed with that of the next 100,000 students.

Then there is another, less tangible, point. Universities may not help much by educating more managers and engineers, but—so it is said—they can help by educating students with values which motivate them to respect, and even to enter the world of wealth creation rather than that of distribution and spending. In fact, this is more difficult than it may appear at first sight.

There is an important sense in which universities cannot promote values at will, but reflect the values of the society around them. British universities are not likely to be more judiciously minded than British society. But British society is changing. There is, for the first time in history perhaps, a widespread awareness that the future of the country rests very largely on its ability to produce the wealth which it consumes.

All parties in parliament want to help industry, and public opinion supports this view. It would certainly be helpful if universities took note of such changes and did not allow the gap between real processes and their academic perception to grow.

The balance of this argument must appear meagre to some. It is certainly not very tangible. But this is precisely what I want to make: it is misleading and dangerous to exaggerate the measurable contribution which universities can make to economic development. Universities are about the frontiers of knowledge, about advancing them by research and teaching the paths that lead to them. That is their help to keep a society including its economy, alive. Universities can probably make a greater contribution if they are not forced to make it directly—although it will not do any harm if they are occasionally reminded of what goes on around them. Unless one wants to build a totally different society, fascist, perhaps, or communist, or one that regards as a threat rather than a productive force in the widest sense of the term, one had better make sure that less tangible contributions to the national effort are not neglected.

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Election output for posterity

The Leeds University Television Centre has been awarded a £1,400 Social Science Research Council grant to cover the cost of recording the new, current affairs and purveyed output of the BBC and ITV companies during the next general election or referendum. It will be stored on video and sound cassettes by the university's own television service.

Leeds University began to create an archive of media output on politics during the February 1974 election and has recorded programmes during the election in October and the Common Market referendum in 1975. It is housed in the audio-visual section of the university library.

Leeds historians have made something of a speciality of the use of mass media in their teaching and Professor D. N. Bilby, chairman of the school of history, will run the election project with Dr Blumler.

CRUISE THE MEDITERRANEAN THIS CHRISTMAS

Jupiter, 9,000 tons of sheer elegance and luxury will be embarking on her Christmas and New Year cruise on December 22.

You can join her and cruise from one end of the Mediterranean to the other. On Christmas Eve you can dine in the Grand Salon in Marseilles, and on New Year's Eve you can dine in the Grand Salon in Marseilles, and on New Year's Eve you can dine in the Grand Salon in Marseilles.

All in all, a superb cruise on a ship that offers all the comfort and amenities you need, with service and entertainment to suit the most discerning of tastes.

Prices for this 14 night cruise range from £335 to £865 per person, with flights from Gatwick, Manchester and Luton direct to and from the ship included in the price. The details are to be found in the "African Coast and Mediterranean Cruises" brochure, available at your Travel Agent now.

Or ring 01-388 0686, Monday to Saturday, but don't delay, Christmas will soon be here.

THOMSON WINTER CRUISES

Prices quoted are final and guaranteed not to change. ATOL 152BC

Newcastle gets £32,000 to improve urban bus routes

Newcastle University's transport operations research group has been awarded a £32,000 grant by the Science Research Council to investigate practical methods of improving the operation of urban bus routes.

The group, which has been receiving SRC support for five years, will examine if changes can be made in the various operations under the control of the bus companies and local authority traffic engineers. It will also consider the circumstances under which such changes could lead to appreciably improved services.

A revision of change-giving procedures, possible modifications to the route network and alterations to the traffic system to give priority to buses will be among the possible changes investigated.

The grant, to be spread over two years, will finance a research team of four within the unit under the direction of Dr R. A. Chapman, deputy director of the group.

He told *THE TIMES* that over the next two years the physical and social conditions in which bus services operated had deteriorated seriously because of increased traffic congestion, declining patronage, and the decentralization of towns. The aim of the research was to overcome these difficulties.

Dr Chapman said a grant from the SRC between 1972 and this December had allowed the research group staff to expand to 14. But it was now concentrating on funding its work through individual grants and contracts. The latest award underlined this new policy.

He added: "The objective of the group is to investigate given patterns of land use and improve provision for the movement of people and goods using means of transport that are already in use or sufficiently developed for them to be understood."

The group concentrated on three main areas: public transport, which includes the bus research project, traffic control and the movement of goods both in urban areas and on a national basis.

An international project, under the auspices of the International Council for Educational Development, is to investigate the purposes and efficiency of higher education in 12 countries: Britain, Australia, Canada, France, West Germany, Iran, Japan, Mexico, Poland, Sweden, Thailand, and the United States.

The British section is being financed by a £5,300 grant from the Leverhulme Trust. The grant holder is Maurice Kogan, professor of government at Brunel University, and he will be assisted by Tony Sussex, University of York, and Mr Jack Roberts, former deputy under secretary of state at the Department of Education and Science.

The group hopes to reach some general conclusions about the efficiency of higher education and the extent to which it gives value for money.

Professor Becker said: "Once completed, it should be a useful book. It should be the British system. People do ask: 'Is it worth it?' nobody has yet gone through the slog of getting all the information together."

As well as the separate national studies (which are to be completed next autumn) the International project also involves a number of "cross-national" studies of such topics as access to higher education and academic freedom.

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How it works in 12 countries

Overseas

Appointments

pages 6, 7 and 27



**THE NEW SOUTH WALES
INSTITUTE OF
TECHNOLOGY
SYDNEY, AUSTRALIA**
**HEAD OF THE SCHOOL OF
FINANCE AND ECONOMICS**

**FACULTY OF
BUSINESS STUDIES**
\$A26,545 (Approx. £20,301)

The New South Wales Institute of Technology is a corporate institution for higher education established to provide a wide range of professional courses for those entering or already employed in industry. Government and technological fields. The Faculty of Business Studies was established in 1967 and currently offers a Bachelor of Business degree program. In 1977 this undergraduate program will offer the opportunity to specialise in any of four areas of concentration and, in addition, two graduate courses will be introduced.

The appointee to this Chair will be responsible for the academic leadership of the staff of the School and day-to-day operation of the instructional and research work. As the Head of School, the appointee will be, ex-officio, a member of the Academic Board and the Faculty Board and may be called upon, in the future, to assume the duties of the Chair of their faculty.

The School anticipates offering an area of concentration within the Bachelor of Business degree in Applied Economics. Further, a Graduate Diploma in Finance is being planned for introduction in the near future. The School will further be offering Finance and Economic subjects in other Graduate courses that are being developed within the Faculty of Business Studies. The appointee should possess a doctorate and should have personal experience at an appropriate level in higher education in the Business Studies field. This experience will have been obtained by lecturing and/or administering in a Faculty of Business Studies at a recognised university or college of advanced education. It is desirable that the Head of the School will have had substantial business experience. Alternatively the appointee may have served as a consultant to business or to government.

**PRINCIPAL LECTURER IN
BUSINESS LAW**
SCHOOL OF ACCOUNTING
\$A22,079-\$A22,782 p.a.
(Approx. £16,886-£17,423)

The Principal Lecturer will provide academic leadership in the area of Business Law within the School of Accounting and will assist the Head of School in the review and further development of Business Law subjects as part of the Faculty's academic programmes. Five Business Law subjects comprise an essential component within the Accounting concentration. The appointee will also accept responsibility for the development of areas such as:

either in legal practice, in government or as a corporate lawyer. Teaching experience in a University or other tertiary institution would be an advantage.

The Council of The Institute encourages academic staff to undertake limited professional consulting for industry and commerce. Opportunities for research work are available. Fees and a contribution toward removal and initial accommodation expenses are provided for overseas appointees. A Housing Loan Scheme is also available.

Applications close in January of 1977. Applicants are to arrange for three confidential referees' reports to arrive by the closing date or shortly thereafter. Further information, including an outline of details to be included in applications may be obtained from, and applications and referees' reports are to be sent to:

**The Agent-General for New South Wales
New South Wales Government Offices
66 Strand, London WC2N 5LZ
England**



The Hong Kong Polytechnic is an expanding institution which is now putting into effect a forward-looking development plan incorporating a credit unitary approach combined with a self-learning system. The basic teaching departments are being re-organised into three Divisions—Engineering, Applied Science and Commerce and Design, together with new broad, inter-disciplinary centres relevant to the needs of Hong Kong. The Polytechnic invites applications for the following posts within the relevant departments tenable from 1 September 1977, except where otherwise indicated:

ACCOUNTANCY
Principal Lecturers in Management Accounting and Financial Accounting; Advanced Accounting; Senior Lecturers in Financial Accounting, Management Accounting, Costing, Auditing, Executorship Bankruptcy and Taxation.
(Professional accounting qualification required for appointments at Principal Lecturer and Senior Lecturer levels.)

APPLIED SCIENCE
Principal Lecturers/Senior Lecturers/Lecturers in Materials Technology, Engineering Science, Surface Finishing, Instrumentation, Packaging, Food Technology, Biochemistry, Medical Physics, Human Biology and allied fields.

BUILDING & SURVEYING
Principal Lecturers in Building Services (MIHVE or equivalent required); Senior Lecturer/Lecturer in Quantity Surveying and allied subjects (ARICS or AIGS required); Valuations/Land/Urban Economics (ARICS required); Town Planning (MRPTI required); Building Technology and allied subjects (MIOB required); Building Services (MIHVE or equivalent required).

BUSINESS & MANAGEMENT STUDIES
Principal Lecturers in Economics; Lecturers in Law, Transport Studies, Banking Studies, Management Studies, Economics and Secretarial Studies.

CIVIL & STRUCTURAL ENGINEERING
Lecturers in Civil Engineering Construction/Concrete Technology/Geotechnical Engineering (posts tenable immediately); Lecturer in Structural Analysis and Design and related Civil Engineering subjects.

COMPUTING SCIENCE
Principal Lecturer/Senior Lecturers/Lecturers in Systems Analysis, Data Processing, Programming, Systems Programming, Management Information Systems, Graphics, Computer Aided Instruction and the application of Computers in other disciplines being taught at the Polytechnic.
(Applicants with experience in offering computer courses to the general public would be particularly welcome.)

DESIGN
Senior Lecturer in Photography; Senior Lecturers/Lecturers in Functional Clothing and Dressing/Surface Pattern; Senior Lecturer/Lecturer in Interior Design (post tenable immediately).

ELECTRICAL ENGINEERING
Senior Lecturer/Lecturers in Utilisation and Control of Electrical Equipment, Design and Specification of Electrical Installation Systems, Electrical Machines and Power Systems.

ELECTRONIC ENGINEERING
Lecturers in Basic Electronic Engineering, Power Electronics, Integrated Circuit Application, Thick Film Technology, Television and Radio Engineering, Control and Communication Systems (posts tenable immediately).

LANGUAGES
Senior Lecturer in Chinese; Lecturers in English and Japanese.

MATHEMATICAL STUDIES
Principal Lecturer in Engineering Mathematics; Senior Lecturers/Lecturers in Mathematics and Operations Research.

MECHANICAL & MARINE ENGINEERING

Lecturers in Machine Design with experience in Mechanics of Machines, Thermotechnology/Plant Engineering, Fluid Power and Control with experience in circuit design.

NAUTICAL STUDIES

Senior Lecturers/Lecturers in general Nautical subjects, Naval Architecture and Ship Construction, Electronic Navigational Aids, Marine Radio Communication and Marine Electronic Automation.

PRODUCTION & INDUSTRIAL ENGINEERING

Senior Lecturers/Lecturers to teach at least two of the following subjects: The Engineering Society, Analysis of Manufacturing Systems, Production Technology, Operational Research (all up to CEI Part 2 level, i.e., degree standard), Polymer Engineering and Industrial Management.

TEXTILE INDUSTRIES

Principal Lecturer/Lecturer in Knitting Technology (experience in wet knitting preferred); Senior Lecturers/Lecturers in Textile Technology (experience in either woven or knitted fabric manufacture yarn manufacture preferred); and Clothing Technology (experience in fashion design or garment production methods preferred).

GENERAL QUALIFICATIONS

Principal Lecturers
(a) a degree or professional qualification; and
(b) an advanced specialist qualification or extensive experience in a specialised field; and
(c) substantial teaching and industrial commercial experience; and
(d) proven administrative ability.

Senior Lecturers
(a) a degree or professional qualification, plus preferably an advanced specialist qualification; and
(b) at least 5 years' professional experience; and
(c) substantial teaching and/or industrial/commercial experience (about 3 additional years); and
(d) proven administrative ability.

Lecturers
(a) a degree or professional qualification or at least a Higher Technician qualification in the appropriate field of study; and
(b) at least 5 years' professional or industrial/commercial experience or at least 3 years' teaching experience or a suitable combination of professional and teaching experience.

SALARIES

Principal Lecturer
HK\$85,500 x 5 increments—\$105,600 p.a.
Senior Lecturer
HK\$38,040 x 11 increments—\$68,940 p.a. (or)
HK\$68,420 x 8 increments—\$83,540 p.a.
Sterling equiv. @ HK\$8.11=£1 (29.97) respectively

£10,543—£13,021;
£8,580—£11,534;
£4,991—£8,501.

Tax on salaries in Hong Kong does not at present exceed 15% of gross earnings.

TERMS

Appointments will be on 2-year gratuity bearing contracts initially. Thereafter suitable appointees may be offered further contracts or superannuation terms of service at the discretion of the Polytechnic. Benefits include passages, long leave, quarters, medical and dental benefits, education allowances and holiday visit passages for children, and a terminal gratuity equal to 25% of basic salary received over the entire contract period. Further details and application form, which should be returned not later than 13th December, 1976, obtainable from the Recruitment Unit, TETOC (Technical Education and Training Organisation for Overseas Countries), 35/37 Grosvenor Gardens, London SW1W 0BS.

Enquiries should quote ref. HKP/THES and clearly state the post involved and its level. Interviews conducted by a team from the Hong Kong Polytechnic will be held at TETOC in February.

Overseas

Prahran College of Advanced Education Australia

Prahran CAE is an established multi-disciplinary tertiary institution affiliated with the Victoria Institute of Colleges and is situated in the Victoria suburb of Prahran, Australia. It currently offers undergraduate/postgraduate diploma courses to 4,000 students in the fields of Art and Design Business and General Studies. The first of the degree courses in these fields will commence next year. The College has recently embarked on a major rebuilding programme. Applications are invited for the following four academic positions:

LECTURER IN DATA PROCESSING

Duties: To lecture in data processing units offered in the degree and diploma programmes within the School of Business. Qualifications: Preferably a tertiary qualification, but considerable emphasis will be placed on relevant experience in the data processing industry. Major experience in the use of a high-level programming language will be an advantage. Some tertiary teaching experience will be considered an advantage. The courses offered are commercially oriented.

LECTURER IN MODERN GREEK LECTURER IN MODERN HEBREW LECTURER IN YIDDISH

Duties: To teach in the language concerned at all levels conducted by the College; to teach background studies to complement the programmes as required by the lecturer-in-charge; to perform such other academic duties as required.

Qualifications: Applicants for the positions must be highly fluent speakers of the standard language and must have a very good command of English. Applicants should possess an appropriate degree or equivalent qualification in the language and have had extensive experience in modern language teaching. In addition, competence in performing related administrative duties would be expected.

Salaries: Academic salaries are currently under review, and it is likely that the new Lecturer Scale will be from \$A11,425 to \$A17,727, plus cost of living adjustments.

Terms and Conditions: The College will meet all reasonable costs incurred by new staff and their families in taking up an appointment and may offer rental subsidies for a limited period. Permanent staff members must contribute to the State Superannuation Scheme, and are eligible for study leave and participation in a housing loan scheme.

Applications, containing a detailed curriculum vitae and the names and addresses of three referees, should be addressed to the Registrar, Prahran College of Advanced Education, 142 High Street, Prahran, 3181, Australia, and should reach him by December 10, 1976. Enquiries about the posts should be directed to the Association of Commonwealth Universities (Appointments), 36 Gordon Square, London WC1H 0PF, with whom a duplicate application should be filed.



**MITCHELL COLLEGE OF
ADVANCED EDUCATION
(Australia)**

Applications are invited for the position of:

Director of Business and Administrative Studies

Mitchell College was established in 1970 and is the largest non-metropolitan College of Advanced Education in Australia. Current enrolment is over 3,000 students. The College is situated on the outskirts of BATHURST, N.S.W., 210 kilometres west of Sydney, at the hub of the Bathurst-Orange Growth Centre. Business and Administrative Studies is one of three programmes of study offered by the College. In each of which courses are provided at various levels up to post-graduate.

The Director will be responsible to the Principal of the College for the development of the Business and Administrative Studies Programmes and the progress of studies of which he is Chairman. As a member of the top management team he is involved in a range of responsibilities within the College beyond the Programme itself.

Applicants should have high level academic qualifications and successful experience at a senior level in Business, Public or Academic administration. Further information may be obtained by writing to the College.

SALARY: \$A26,545 per annum (under review).
CONDITIONS: of service include a superannuation scheme; provision for recreation and study leave, and a specially negotiated bank finance arrangement for the purchase of a home. Fees for the appointee and family to Bathurst and responsible removal expenses will be paid.

APPLICATIONS: setting out personal data; telephone number; qualifications and experience, accompanied by the names and addresses of three (3) referees and a recent photograph of the applicant should be lodged with:

The Secretary (Staff Appointments),
MITCHELL COLLEGE OF
ADVANCED EDUCATION,
BATHURST, N.S.W., 2770, AUSTRALIA.

Applications close on Monday, 17th January, 1977.

WESTERN AUSTRALIAN INSTITUTE OF TECHNOLOGY



Applications are invited for the academic positions listed below. The Institute is a major tertiary institution located in Perth. All courses are characterised by a multi- and interdisciplinary approach to higher education. Awards at degree and post graduate level are made.

SCHOOL OF MINING & MINERAL TECHNOLOGY

GEOLGY
SENIOR LECTURER:

To teach, develop and supervise the course in mining geology at the W.A. School of Mines, a branch of the Institute located at Kalgoorlie. Applicants should be experienced in Archaeology, preferably both in the field and underground. A good knowledge of ore genesis, igneous petrology, structural geology and the broader aspects of stratigraphy, together with tertiary teaching experience is desirable.

SCHOOL OF SOCIAL SCIENCES

PSYCHOLOGY
TUTOR/SENIOR TUTOR/LECTURER:

To teach in one or more of the following areas: human performance and ergonomics, learning, perception, personality. Favourable consideration will also be given to candidates with interest in teaching external and service courses. Experience in teaching at undergraduate and graduate level preferred.

SOCIAL SCIENCES—SOCIOLOGY
TUTOR/SENIOR TUTOR/LECTURER/SENIOR LECTURER:

To develop and teach a course that has a critical orientation in one of the following areas: Australian political sociology, sociology of the family. Applicants whose interests lie in areas other than the above should also apply. Applicants should be prepared to teach in areas other than their field of major interest.

HOME ECONOMICS
SENIOR LECTURER:

To develop courses which integrate psychological aspects of human behaviour with practical application of home economics, e.g., food evaluation, nutrition, education and community/consumer research. Postgraduate degree in behavioural sciences preferably in the areas of sensory perception and social psychology. Lecturing and research experience at tertiary level is essential.

SCHOOL OF TEACHER EDUCATION

ANALYSIS AND STRATEGIES
SENIOR LECTURER:

To teach classroom observation techniques, classroom climate, teaching strategies and micro-teaching.

CURRICULUM AND INSTRUCTION
SENIOR LECTURER:

To teach general curriculum theory and development, and curriculum and instruction as applied to a particular subject area; preferably language arts, art education, or social science, with an emphasis on geography or economics.

SCHOOL OF ENGINEERING AND

SURVEYING

ELECTRICAL ENGINEERING—CONTROL SYSTEMS
SENIOR LECTURER:

To organise and lead the teaching and development of subjects associated with the application of control to engineering systems, including control system identification and system optimisation techniques.

ELECTRICAL ENGINEERING—DIGITAL ELECTRONICS
TUTOR/SENIOR TUTOR/LECTURER:

To teach digital systems and hardware, including the application of microcomputers and microprocessors.

ELECTRICAL ENGINEERING—POWER ENGINEERING
TUTOR/SENIOR TUTOR/LECTURER:

To teach design and production associated with the electrical power industry.

SALARY SCALES: Tutor UK £7,241-£8,570, Senior Tutor £8,792-£10,120, Lecturer and Counsellor £10,120-£13,532, Senior Lecturer £13,797-£16,012. (At the rate of exchange on 20-10-76). Salaries are payable in Australian Dollars.

QUALIFICATIONS: SENIOR LECTURER—A good higher degree and considerable experience, including tertiary teaching, are preferred. LECTURER—Post-graduate qualifications with experience, including teaching, are preferred.

SENIOR TUTOR/TUTOR—A relevant degree with some industrial or teaching experience is preferred.

TENURE: Appointment may be either permanent or for a short-term period of up to three years.

CONDITIONS: For permanent staff conditions include leave for family; assistance with accommodation, removal expenses, superannuation (similar to FSSU), six weeks annual leave plus public holidays, three months long-service leave on completion of each seven years' service, sick leave and assisted study leave. For short-term staff superannuation, assisted study leave, and long-service leave conditions do not apply.

Detailed applications (including a curriculum vitae and names of three referees) should be submitted to the Migration Liaison Officer, Western Australia House, 115 Strand, London WC2R 0AJ. Further particulars may be obtained from the above address.

When applying please quote reference HES.

EDUCATIONAL SERVICES

COUNSELLOR SERVICES
COUNSELLOR:

To participate in the overall programme of vocational, educational and personal counselling giving emphasis to the evaluation and validation of counselling techniques. Qualifications in psychology, practical counselling experience and interest in research techniques required.

SCHOOL OF HEALTH SCIENCES

THERAPY—OCCUPATIONAL THERAPY
SENIOR LECTURERS:

Two positions are available for suitably qualified Occupational Therapists. Preference may be given to applicants with relevant experience in the education of Occupational Therapists. Postgraduate work, additional qualifications and an understanding of educational theory and practice will be advantageous.

THERAPY—SPEECH & HEARING SCIENCE
TUTOR/SENIOR TUTOR/LECTURER:

To teach audiology, and/or speech and hearing disorders in adults, to undergraduate students in the course for the degree in Speech and Hearing Science. Applicants must possess qualifications recognised for membership of the Australian Association of Speech and Hearing, and have had clinical experience.

MEDICAL TECHNOLOGY—NUTRITION AND FOOD SCIENCE
SENIOR LECTURER:

A vacancy exists for a qualified dietitian with responsibility for the educational leadership of the Bachelor degree course in Nutrition and Food Science, and the graduate course in Dietetics.

MEDICAL TECHNOLOGY—NUTRITION TUTOR/SENIOR TUTOR/LECTURER:

Applications are invited from graduates with a broad knowledge of clinical nutrition and physiology with teaching experience in applied nutrition and dietetics.

MEDICAL TECHNOLOGY—HISTOPATHOLOGY
TUTOR/SENIOR TUTOR/LECTURER:

Applications are invited from graduates with experience in histopathology, cytology and histochemistry. Teaching experience in Health Science programmes would be an advantage.

MEDICAL TECHNOLOGY—PHYSIOLOGY
TUTOR/SENIOR TUTOR/LECTURER:

Applications are invited from graduates with a major in Physiology to teach circulatory, digestive, endocrine musculo-skeletal and respiratory physiology. Teaching experience with health science students would be an advantage.

MEDICAL TECHNOLOGY—MICROBIOLOGY
TUTOR/SENIOR TUTOR/LECTURER:

To lecture in Medical Microbiology as well as contributing to other microbiology programmes conducted by the Department. Experience in Medical Microbiology required and teaching in Health Science programmes an advantage.

MEDICAL TECHNOLOGY—ANATOMY
TUTOR/SENIOR TUTOR/LECTURER:

Applications are invited from graduates with a major in Anatomy to teach gross, applied and microscopic anatomy in health science students.

CLOSING DATE: NOVEMBER 28th

(except Senior Lecturer Occupational Therapy which is 3rd December, and Senior Lecturer Nutrition and Food Science, which is 8th December).

Priority for research projects

Sir,—Peter Wilby's report on the universities in Papua New Guinea (THES, October 22), is in general fair and serious-minded. I hope that the present staff at these universities will read and comment on it soon. There is one point which I feel I may comment on from here, having recently arrived in London after four years' work at the University of Papua New Guinea, where I was, from 1974/76, chairman of the university's research committee.

Mr Wilby writes: "According to one academic, the University of Papua New Guinea has 'research funds so generous that in past years the main job of the committee in charge of them was to find people prepared to spend the money.'"

It is true that in past years the university has allocated 3 per cent of annual recurrent expenditure from its budget for administration by the research committee, and that not all of this money has been spent each year. However, the 3 per cent level is by no means sacrosanct, and considerable cuts were made in 1976 in response to news that the university's overall grant was to be reduced. The University of Technology at Lae (not mentioned much by Mr Wilby) was hit much harder: although most of its research was in the applied field, its research funds had to be cut to nil to meet the financial shortfall in its overall grant.

Aside from the 1976 financial situation, however, the more important general point to make is that the committee at UPNG has always pursued a general policy of giving strong priority to research projects which are concerned with the society and environment of Papua New Guinea, and of scrutinizing all projects carefully from the point of view of possible benefits, feasibility, methods, and costs.

The committee has encouraged staff members to think of understanding research in PNG and to encourage their research activities into three broad areas: social, economic and environmental. But this is not the same as simply 'finding people prepared to spend the money'. If Mr Wilby had asked for figures and facts from the research committee itself (the secretary is now a Papua New Guinean, Mr Pascol Vira), he would have been supplied with the means to modify the slapdash statement he quotes from "one academic" at UPNG.

A further reason why not all of the research funds are currently being spent at UPNG is that the staff teach over two very long semesters in a strict environment, and have been much occupied recently with adapting their courses to the needs of the country. Given this, many simply do not have the

time to plan and execute research projects as well.

Yours faithfully,
ANDREW STRATHERN,
Professor of Anthropology,
University College London.

Sir,—We feel that Peter Wilby's article on Australian tertiary education research units (THES, November 5) was generally a fair report on the current state of tertiary teacher training in Australia. However, as students in different intakes into the Diploma in Tertiary Education course at the University of New England, we feel that the article requires some clarification and comment.

We do not concede that the various Australian tertiary education diplomas lead to a "shadowy existence". Of the three institutions which offer a formal qualification (Monash University, University of New England, and Darling Downs Institute of Advanced Education), two—New England and Darling Downs—offer courses on an external (correspondence) basis. This compares favourably with the offerings in Britain, where we believe that external study is available at only one or two Scottish colleges of education.

Our impression in the New England diploma is that its students are mainly more junior staff (i.e. below senior lecturer level) but with tenure. The statement attributed to Bob McCaig is true for some students, but not in general. The attitude of senior staff is likely to be indifferent rather than antagonistic—with occasional advice about the relative value of research publications over teaching qualifications. In universities, the assumption seems to persist that anyone competent to add to knowledge is equally competent to pass it on. Real encouragement to undertake training is much more likely to be given to college staff, but it is stressed that successful completion of a teaching diploma will not guarantee an additional promotion or incremental progression.

While recognizing that no formal qualification can ensure perfect teaching at any level, we look forward to the day when a tertiary education diploma is an essential component.

Meanwhile, the many Australian tertiary education research units continue to assist those departments and individuals who are actively concerned about their students' learning.

D. R. R. GOWDIE,
University of Papua New Guinea;
M. F. WESTCOTT-LEWIS,
Riverina College of Advanced Education,
Wagga Wagga, New South Wales.

Introduction to psychology

Sir,—Professor Peter Harriot (THES, October 29) complains of "academic psychology in Britain has traditionally tended to concentrate much of its resources on human information processing. Arene such as developmental psychology, social psychology, and personality form part of the syllabus, but usually a relatively small part".

This may be true of some universities: it is difficult to know if it is general, as universities do not usually make detailed syllabuses public. The Council for National Academic Awards system, on the other hand, requires that syllabuses be planned in detail, assessed by a committee which is fairly representative of the discipline, and if approved made generally available to anyone. This system is not perfect, but it does on the whole mean that syllabuses are reasonably well balanced.

As a member of the CNAAP psychology board (and also as chairman of the Association for the Teaching of Psychology) I have had the opportunity to become familiar with virtually all major courses in psychology outside the university sector. Whatever their other merits or demerits, I do not think they are generally guilty of neglecting substantial areas of their subject.

It is not, either, just a matter of throwing in everything you can think of: the CNAAP process demands some attempt to work out a rationale for what is to be done, and to show how this helps to achieve one's stated aims.

The system of approving new GCE A-level subjects is different and, in my experience, much more haphazard, particularly as regards the role played by the Schools Council. However, in the case of the one existing A-level in psychology, that offered by the Associated Examining Board, the various planning committees conscientiously and consistently tried to make the syllabus a reasonably representative introduction to the subject. The views of students and teachers are systematically sought, though the system of change is somewhat cumbersome.

All disciplines are subject to inertia. Not all its effects are harmful, but in so far as they are it is possible consciously to diminish them.

Yours faithfully,
JOHN RADFORD,
Dean,
Faculty of human sciences,
North East London Polytechnic.

Mature students

Sir,—May I correct the picture drawn in your report on mature student admissions at the University of Edinburgh (THES, October 22)? In 1972 there were 1572 students over the age of 22 taking first degree courses, which represented over 18 per cent of first degree students, not 3 per cent as your report suggests.

If all students are included who were then working at undergraduate level, the proportion of students over 22 rises to more than 20 per cent. The proportion of mature students is indeed rising. Mature students are indeed making a substantial contribution to the success of the university's degree courses.

In addition, students over 23 (which is our usual definition of a "mature student") are encouraged to seek some relaxation of the general entrance requirement, and in 1972 there were 42 mature students admitted in this way. Quite a substantial number. The incidence of mature students varies a good deal from one faculty to another, because some courses are more difficult to pursue than others. But many mature students meet the normal entrance requirements anyway.

Yours faithfully,
N. A. FURNESS,
Convener,
Entrance arrangements
Committee,
University of Edinburgh.

Collection of data

Sir,—In his review of my book *Social Class, the Nominal Group, and Verbal Strategies* (THES, September 24) Sinclair Rogers makes only three observations of any consequence, and in all of them he has missed the point completely.

He "doubts the validity" of the data used in the study. But he fails to observe (a) that I took care not to draw any unwarranted conclusions from the data, and (b) that most of the objections against the data are answered in the book. The commonest objection is that the method of data collection was unfair to the lower-class children, who might have been intimidated by the unfamiliar situation and the middle-class interviewers. Yet the data shows quite clearly that there was no evidence of this: the speech-output of the lower-class children was equal to that of the middle-class, and any comparison with, say, Levin's experiences with black informants is not justified.

Secondly, the reviewer mentions the "oversimplistic... dichotomy" between lower class and middle class which is "the basis of the whole series". But the majority of my statistics and conclusions are based on no such dichotomy; in fact, a fairly elaborate ten-point scale of social class was used, based on the occupation and level of education of both parents. The terms "working" and "middle" class are simply convenient, if infelicitous, ways of referring to the poles of this continuous scale. Again, the book makes this point perfectly clear.

The reviewer then criticizes, at some length, the basis of the "Communication Index". I am inclined to agree, but in fact the book hardly mentions this index, except to point

out that it was not as good a class as predicting linguistic success.

Finally, the reviewer doubts the value of the series for its "English class" aspect. The stated aim of the series was to investigate the relationship between language and social class, and not to be a book that he disappeared of its own accord.

In short, the reviewer's criticisms are touched on in the book. Yours faithfully,
PETER HAWKINS,
Department of English,
University of Wellington,
New Zealand.

Sir,—Grenville Wilby (THES, October 29) writes of the "Theoretical and Practical" (Richard Nelson) book has 959 footnotes, as well as a bibliography, but in his review, the precise number of the index is not given. Given the increasing concern about standards in future reviews, can aid up?

Yours faithfully,
ANTHONY HARTNETT,
MICHAEL NASH,
Lecturers in the Sociology,
Department of Education,
University of Liverpool.

The reviewer then criticizes, at some length, the basis of the "Communication Index". I am inclined to agree, but in fact the book hardly mentions this index, except to point

out that it was not as good a class as predicting linguistic success.

Chairs

Mr Alun Chalmers, reader in social psychology and dean of the school of social sciences at the University of Sussex, has been promoted to a professorship of social psychology from January 1.

Mr Norman MacLennan, director of the school of education and professional studies of the University of Sussex, has been promoted to a professorship from January 1.

Appointments

Universities
Aberdeen
Lecturers: G. W. Patterson (jurisprudence); H. R. Post (educational psychology); Research fellows: Z. Kucharski (sociology), P. F. Howarth (anthropology), M. R. Giddings (pathology), M. Leslie, A. A. Waterfield (unit for research on addictive drugs), L. M. Laird (zoology). Honorary research fellow: M. H. Koocher (pharmacology).

Bath
Lecturers: M. J. Bakhin (school of electrical and electronic engineering); M. J. Priest (school of management); M. J. Serfaty (school of modern languages). Research fellow: R. M. Lewis (school of mathematics).

Strathclyde
Head of department: Professor David Telford (electrical engineering).

Sussex
Chairman of the council and senior pro-vice chancellor: Dr Leslie Farrer Brown.

Polytechnics

Central London
Principal Lecturer: Alan Jago (planning unit). Senior lecturer: Richard Guich (planning unit). Lecturer: Andy Thornley (planning unit).

Honorary degrees

Bradford
Med: Mr John Stanley Bell, headmaster, Silsden (Hothfield Street Junior School).

DSC: Dr John Frederick Wilkinson, formerly consultant physician and director of the department of haematology, Manchester Royal Infirmary and reader in medicine and haematology, University of Manchester.

Loughborough
DSc: Sir Robert Mark, the Metropolitan Police Commissioner.
MA: Mr Arthur Deskin, chairman of the board of directors of the Echo Press Ltd, Loughborough.

Recent publications

Research in Assessment: A series of papers read at a one-day symposium on the theme of "Assessment in the 1970s" at the University of Oxford, 1975. The series covers aspects of assessment at both secondary and tertiary level. It is available from the Secretary of the Education Division, The Chemical Society, Burlington House, London WC1N 3AH. Price £2.50 or £1.50 to members of the education division.

Two's company

Sir,—The decision of the University of Lancaster to allow Mr. C. Cookley to share an appointment in its Department of Religion is an important precedent. It adds one more example of the possibilities open to those who are trying to combine their professional and personal lives, and to allow the joint responsibility to be shared by the two partners, so avoiding the disruption of the work of one.

One might have hoped that THES would have given an encouraging response to this, but a serious attempt to do so is lacking. It is not only the marriages of convenience, but the marriages of necessity, which could allow me space to offer congratulations to Lancaster on a particularly forward-looking decision, and best wishes to the couple for the success of their joint venture.

Yours faithfully,
R. F. DREW,
Department of Psychology,
University of Durham.

Noticeboard is compiled by Patricia Santinelli and Pauline Gamble

NOTICE BOARD

Grants

Edinburgh

Biology—£11,929 from the Agricultural Research Council over a period of one year, in support of research on the regulation of lipid metabolism during the germination of oil-seedling embryos, under the direction of Dr A. B. Leitch and Dr J. G. McVie of the department of therapeutics, and the South-East Regional Blood Transfusion Service. Molecular biology—£4,000 from the Macmillan Memorial Fellowship over a period of one year, in support of a senior visiting fellow in the department of health, education and welfare over a period of one year, in support of research on the general analysis of protein synthesis, under the direction of Dr N. S. Willets; £22,000 from the MRC over a period of three years, in support of research on the role of proteins in the regulation of cell division, under the direction of Dr C. J. Leaver.

Veterinary pathology—£10,870 from the Agricultural Research Council over a period of three years in support of research on the structure and replication of coronavirus, under the direction of Dr R. W. Blaxter. Agriculture—£8,064 from the Agricultural Research Council over a period of three years in support of research on the analysis of cell size distributions, under the direction of Dr W. D. Dunachie. Dr Millicent Masters and Dr P. M. A. Broda; £46,676 from the SRC over a period of three years, in support of research on the role of the Arthritis and Rheumatism Council over a period of two years in support of research on the role of alpha-macroglobulins in the inflammatory response, under the direction of Dr K. James; £9,817 from the Cancer Research Campaign over a period of one year, in support of research on the role of tumour necrosis factor and tumour products in tumour immunity, under the direction of Dr K. James.

Medicine—£9,000 from Astra Pharmaceuticals Company in continuing support of cardiological research, under the direction of Dr M. F. Oliver. £20,000 from the Science and Technology Department over a period of two years, in support of a study of bone blood flow measurement by perfused tissue, under the direction of Dr J. N. Macpherson.

Pharmacy—£5,545 from Beecham Pharmaceuticals in continuing support of research on the effect of anti-allergic compounds on the immunological response and lung mechanism.

Forthcoming events

"The Professional Staff Involved in Social and Educational Intervention with Children and Deprived Young People" is the theme for the sixth international conference of the World Association of Social Workers (WASW) to be held in Montreux, Switzerland from April 12 to 16, 1977. Further details from WASW, c/o the British Social Work Council, 11, St. James's Place, London SW1A 1DG. Telephone: (01) 526.04.45.

"Teaching and Examining Data Processing and Systems Analysis", a two-day conference sponsored by the Joint Committee for the Advancement of Computer Studies, is to be held at the John Dalton Faculty of Technology, Manchester Polytechnic, December 16 to 17, 1976. Tickets cost £7 per day for non-members, £4 for members of the Department of Physics and Mathematics, Manchester Polytechnic.

Britain's first International Festival of Disparapans (slide-tape sequences showing with brief projection and dissolve) is to be held at the Grosvenor Hotel, London, from December 9 to 11, 1976. It is being organized by the Royal Photographic Society, in conjunction with the RPS members (£3 for non-members) from December 9 to 11 and £14 for RPS members (£15 for non-members) on December 12. Tickets and information are available from Tony Robertson, Disparapans Festival, Grand Metropolitan Hotel, Grand Metropolitan House, Stratford, Essex, London, W1A 4YD. Telephone: 01-629 6515.

The annual Industrial Archaeology Workshop at Kingston Polytechnic will be held on Friday, December 3, 1976 at 7 pm in the senior common room at the Kingston Park Centre of the polytechnic. In addition to speakers there will be a showing of the society's film "Making a Case" about the Kingston College of Art and Design, in conjunction with the Kingston Polytechnic School of Art and Design. Admission is by invitation, available from Bryan Woodruff, Centre for Industrial Archaeology, Kingston Polytechnic, Kingston, Surrey, TW20 0EX.

"Native American Culture and History and the Role of the Indian in American Studies" is a conference to be held at the Polytechnic of Central London, American Studies Resource Centre, on November 22. It will deal with the frontier thesis, the American Indian movement today, and the role of the Indian in American history. The conference will be held at the Polytechnic of Central London, Regent Street, London, W1.

"The Past and the Present in the Present" is the Malvern memorial lecture, will be delivered by Dr Maurice Smith, Director of the Department of History of London, on December 7 at 8 pm. Admission free.

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THES 19/11/76

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BOOKS

Speaking as children

The Use of Definite and Indefinite Reference in Young Children
by Michael R. Maratsos
Cambridge University Press, £5.50
ISBN 0 521 20924 2

Single Word Usage, Cognitive Development and the Beginnings of Combinatorial Speech
by Maria Montez Rodgon
Cambridge University Press, £6.50
ISBN 0 521 20884 X

These two books are for the specialist. And the specialist will find them frustrating. They are American Ph.D. theses of the early 1970s and already have a slightly antique flavour. For the state of the study of language acquisition has been shifting in these past six or seven years, away from an emphasis on the acquisition of syntax as an aspect of linguistic competence, towards semantic and pragmatic communicative competence.

The research reported here was designed under the thrall of the latter-day Chomskian programme of studying the onset of syntactic rules, with relatively little attention paid to the functions served by the utterances in which these rules were embedded, or of the nature of the contexts in which they occurred. Both studies are a cross-section of the child's language use, as seen through the prism provided by studying children at different ages in the hope of reconstructing how a single child might come to full mastery of language. Both authors, moreover, are faced with the task of interpreting their mainly experimental results in the light of theoretical changes in psycholinguistic theory, though the experiments were designed before these alterations to the landscape of development linguistics.

In spite of that, the two books are of interest. Maratsos concerns himself with what might seem a narrow phenomenon—the mastery of the definite and indefinite articles, the *a* and *a*—but which, in fact, can shed light on far-reaching linguistic matters. Rodgon's book attempts to answer the question of what it is that moves children from holophrastic, one-word speech to combinatorial, grammatical speech. Maratsos succeeds in illuminating the narrow segments of his question. Rodgon, having chosen an impossibly wide problem, rather limp efforts to 'train' children who were holophrastic to express similar kinds of relations in two or three word utterances—fails to reach anything by way of a conclusion, except for a summary of what did not work for him. She is also concerned with the psychological 'prerequisites' of combinatorial grammar. But again, what emerges is a non-finding.

There is no clearly discernible relationship between the onset of combinatorial grammar and such standard Piagetian milestones as deferred imitation, symbolic play, and object displacement. Nor is there any correlation between grammatical speech and the capacity for role play and role reversal. Such correlational 'testing' is difficult to take seriously. Children by the end of their first year reverse roles all the time; witness role reversal in the 'give-and-take' games. One would want to know something more contextualized in the child's own language history before drawing any conclusions about either cognitive or social prerequisites for language. Insofar as Rodgon generalizes what she finds as not important in the onset of combinatorial speech, she leaves herself open to the charge that negative results are never tested enough to establish a general law about what factors do not work.

Consider first Maratsos. A child uses the *a* and *a* to mark either specificity—a for any member of a class, the *a* for a particular member—or to mark anaphora, pointing back to something earlier in the utterance. 'I saw a lamb; the lamb was frolicking.' Such marking of very deep linguistic significance is one of a set of procedures generally called 'determiners'. There is evidence that children, as young as 17 months, are sensitive to the difference between *a* and *a* used to mark proper names and nouns with the

indefinite article. Nouns with differential determining markers are handled by these infants with some degree of syntactic subtlety. Maratsos starts in three years. There are many ways in which determiners or specificity can be realized linguistically and pre-linguistically as well, as when a child points to or touches an object. By a series of clever and, alas, often constricting experiments, Maratsos documents a wide range of situations in which the three to six-year-old uses *a* and *a* comprehensively. Though he is so keen to get at their use *tout pur* that in some situations he even has his children hold their hands on their heads to prevent them from pointing.

A principal barrier to mastery is the child's incapacity to recognize that what he himself knows, the adult to whom he is addressing an utterance does not share—so that the *a* is used without a sharing of specificity. This inappropriate usage is deemed to be egocentric—and it is found in both production and comprehension. Maratsos assumes the child first marks specificity for himself, and also initially cannot take the adult's point of view into account. But there is evidence now in the literature, as well as in Maratsos's data, to indicate that there are contexts in which, indeed, the child can and does recognize the adult's perspective. He can, for example, follow an adult's line of regard at four or five months to establish a joint focus of attention. There is, alas, a constricting effect of looking just at definite and indefinite articles to resolve issues of egocentrism and they are not resolved. His models of 'rule following' in

article use tend to lack the way of linguistic generality that the adult has. Rodgon is interested in the child's *a* and *a* because he is ready to use multi-word utterances. He is given some sense of the sense of hearing as well as the sense of seeing as well as the sense of touching. He is given some sense of the sense of hearing as well as the sense of seeing as well as the sense of touching. He is given some sense of the sense of hearing as well as the sense of seeing as well as the sense of touching.

The two books are of interest. Maratsos concerns himself with what might seem a narrow phenomenon—the mastery of the definite and indefinite articles, the *a* and *a*—but which, in fact, can shed light on far-reaching linguistic matters. Rodgon's book attempts to answer the question of what it is that moves children from holophrastic, one-word speech to combinatorial, grammatical speech. Maratsos succeeds in illuminating the narrow segments of his question. Rodgon, having chosen an impossibly wide problem, rather limp efforts to 'train' children who were holophrastic to express similar kinds of relations in two or three word utterances—fails to reach anything by way of a conclusion, except for a summary of what did not work for him. She is also concerned with the psychological 'prerequisites' of combinatorial grammar. But again, what emerges is a non-finding.

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BOOKS

Back to empiricism

Semantics and Comprehension
by Herbert H. Clark
Monton, DII 32.00
ISBN 90 279 3384 7

Clark's monograph will serve to integrate two aspects of linguistic inquiry which should never have been allowed to drift apart in the first place. For more than a decade now theoretical linguists by the score, freed from the constraints of behaviourism, have pursued Chomsky's halfhearted rule-based, node diagrams, notions of deep structure and native-speaker intuitions. In this pursuit an important scientific principle has been overlooked: that a healthy science needs an empirical as well as an imaginative component.

The result is first that in concentrating upon what ideal speakers ought to say, many linguists have neglected what real speakers do say. Second, perhaps as a result of this same preoccupation, their generative grammars have been based upon end-product sentences rather than upon the cerebral processes which have combined to produce these sentences.

What makes this little book refreshing is that Clark is constantly making empirically verifiable statements and then proceeding to test them. The typical underlying technique is to give a subject a sentence—e.g. 'The A is above the B'—and then, a diagram depicting A on top of B—and elicit the judgment 'true'. Having analysed the process of comprehension in such tests into four stages, he goes on to elaborate his principle of congruence: that the sentence and the diagram both produce in the subject semantic representations and that there must be mental operations which bring the two representations into congruity. This analysis

has obvious empirical implications: a linguist's deep-structure representations should be directly related to their complexity to the length of time by which subjects in comprehension take to respond. The way is open for experimental inquiry into deep structure.

Having outlined his model, Clark examines the psychological processes concomitant with the logical juggling which philosophers call Double Negation. Is the switch of judgment whereby we arrive at the verdict 'false'—when we are given a diagram showing A above B and the sentence 'B is not below A'—effected by a deep-structure conversion formula or by an algorithm which compares two semantic representations, one of the diagram, one of the sentence? The author chooses in favour of the latter—which he rather loadedly calls his 'true' model. The empirical justification of his model lies in the mapping of its predictions in terms of latency times taken by subjects in judging a given sentence true or false. In successive sections on locatives, comparatives and actives/passives, Clark goes on to demonstrate the flexibility of his model.

The wheel is slowly turning. Linguistics in the sixties rejected behaviourism and expostulated introspection. Now experimental psychologists are gently insisting that the results of theoretical enterprise must, at one level of the discipline, be judged according to the behaviourist code of empirical rigour. Mapping one set of intuitions ('deep-structures') on to another set of intuitions (the linguist's own judgments concerning grammaticality) is no longer good enough.

Trevor Eaton

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